CLAIMS

- 1. Composition for the oxidation dyeing of keratihous fibres, characterized in that it comprises, in a medium appropriate for the dyeing of the said fibres:
- at least one oxidation base;
- and at least one coupler chosen from the compounds of following formula (I) and/or their addition salts

with an acid:

10 in which:

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• R₁ represents a hydrogen atom or a linear or branched radical comprising from 1 to 15 carbon atoms (it being possible for the branching or branchings to form one or more carbonaceous rings comprising from 3 to 7 ring members) which can comprise one or more double bonds and/or one or more triple bonds (the said double bonds optionally resulting in aromatic groups) and one or more carbon atoms of which can be replaced by an oxygen, nitrogen or sulphur atom or by an SO₂ group and the carbon atoms of which can, independently of one another, be substituted by one or more halogen atoms, the said R₁ radical comprising neither peroxide bonds nor diazo, nitro and nitroso radicals;

 \bullet R₂/represents a hydrogen atom or a linear or branched

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radical comprising from 1 to 20 carbon atoms (it being possible for the branching or branchings to form one or more carbonaceous rings comprising from 3 to 7 ring members) which can comprise one or more double bonds and/or one or more triple bonds (the said double bonds optionally resulting in aromatic groups) and one or more carbon atoms of which can be replaced by an oxygen, nitrogen or sulphur atom or by an SO₂ group and the carbon atoms of which can, independently of one another, be substituted by one or more halogen atoms, the said R₂ radical comprising neither peroxide bonds nor diazo, nitro and nitroso radicals;

 \bullet R₃, R₄ and R₅, which are /identical or different, represent a hydrogen or halfogen atom or a linear or branched radical comprising from 1 to 20 carbon atoms (it then being possible for the branching or branchings to form one or more rings comprising from 3 to 7 ring members) which can comprise one or more double bonds and/or one or more triple bonds (the said double bonds optionally resulting in aromatic groups) and one or more carbon atoms of which can be replaced by an oxygen, nitrogen or sulphyr atom or by an SO, group and the carbon atoms of which/can, independently of one another, be substituted by one or more halogen atoms, the said radical comprising neither peroxide bonds nor diazo, nitro and nitroso radicals and it being understood that R₅ cannot represent a hydroxyl, thio or amino radical and it being understood that the R_3 , R_4 and R_5 radicals cannot be connected to the benzene ring of the formula (I) via an -NH-NH- bond:

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Y represents a hydrogen or halogen atom; an $-OR_6$, $-SR_6$ or $-NH-SO_2R_6$ group in which R_6 represents a linear or branched C_1-C_4 alkyl radical (it then being possible for the branching or branchings to form one or more rings comprising from 3 to 6 ring members), optionally substituted by one or more radicals chosen from the group: halogen, hydroxyl, C_1-C_4 alkoxy, amino or C_1-C_4 aminoalkyl; a phenyl radical, optionally substituted by one or two radicals chosen from the group: C_1-C_4 alkyl, trifluoromethyl, carboxyl, C_1-C_4 alkoxycarbonyl, halogen, hydroxyl, C_1-C_4 alkoxy, amino or C_1-C_4 aminoalkyl; or a benzyl radical.

2. Composition according to/Claim 1, characterized in that, in the said compounds of formula (I), R_1 denotes a hydrogen arom; an A/group composed of a linear or branched C1-Cs alkyl padical which can carry one or two double bonds or one triple bond, which may or may not be substituted by/a group chosen from an A_2 , A_4 and A_5 group as defined below, which may or may not be substituted by one or two identical or different groups chosen from the N-(C_1 - C_3) alkylamino, N-(C_1 - C_3) alkyl-N- (C_1/C_3) alkylamino, (C_1-C_6) alkoxy, oxo, alkoxycarbonyl, /acyloxy, amido, acylamino, ureyl, sulphoxy, sulphony, sulphonamido, sulphonylamino, bromo, cyano or carboxyl groups, and which may or may not be substiftuted by one or more hydroxyl, fluoro or chloro groups; an A group composed of an aromatic group of phenyl or naphthyl type which may or may not be substituted by one to three identical or different groups chosen from the methyl, trifluoromethyl, ethyl, isopropyl, butyl, pentyl, fluoro, chloro, bromo,

methoxy, trifluoromethoxy, ethoxy, propyloxy, ace#yloxy, acetyl and cyano groups; an A, group composed of heteroaromatic groups chosen from the furanyl / thiophenyl, pyrrolyl, imidazolyl, thiazolyl, oxazolyl, 1,2,3-triazolyl, 1,2,4-triazolyl, isoxazolyl, isothiazolyl, pyrazolyl, pyrazolotriazolyl, pyrazoloimidazolyl, pyrrolotriazolyl, pyrazo/lopyrimidyl, pyrazolopyridyl, pyridyl, pyrimidyl, benzimidazolyl, benzoxazolyl, benzothiazolyl, indolyl, indolidinyl, isoindolyl, indazolyl, benzotriazo/yl, quinolinyl, benzimidazolyl or benzopyrimidyl groups, optionally substituted by 1 to 3 radicals chosen from linear or branched C, -C, alkyl, C_1-C_4 (poly) hydroxyalkyl, carboxyl, alkoxycarbonyl, halogen, amido, amino or hydroxyl; an A, group composed of a C3-C7 cycloalkyl radical or a norbornanyl radical optionally carrying a double bond and optionally substituted by 1 or 2 radicals defined by linear or branched C1-C4 alkyl, C_1-C_4 (poly) hydroxyallyl, carboxyl, alkoxycarbonyl, halogen, amido, amino or hydroxyl; or an As group composed of a heterocycle chosen from the dihydrofuranyl, tetrahydrofuranyl/ butyrolactoneyl, dihydrothiophenyl, tetrahydrothiopMenyl, tetrahydrothiophenoneyl, iminothiolanyl, dimydropyrrolyl, pyrrolidinyl, pyrrolidinoneyl, imidazolidinoneyl, imidazolidinethioneyl, oxazolidiny/, oxazolidinoneyl, oxazolanethioneyl, thiazolidihyl, isothiazoloneyl, mercaptothiazolinyl, pyrazolidinoneyl, iminothiolanyl, dioxolanyl, pentalactone/1, dioxanyl, dihydropyridinyl, piperidinyl, pentalactamyl, morpholinyl, pyrazoli (di) nyl, pyrimi(di)nyl, pyrazinyl, piperazinyl and azepinyl rin**g**s.

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- 3. Composition according to Claim 2, characterized in that R₁ represents a hydrogen atom, a methyl/ ethyl, allyl, phenyl, isopropyl, benzyl, flugrobenzyl, 5 hydroxybenzyl, difluorobenzyl, trifluorobenzyl, chlorobenzyl, bromobenzyl, methoxybenzyl, dimethoxybenzyl, (trifluoromethoxy)benzyl, 3,4-methylenedioxybenzyl, 6-chloropiperonyl, 4-methylthiobenzyl, 4-methylsulphonylbenzyl, 4-acetylaminobenzyl, 4-carboxybenzyl, 1-naphthomethyl/or 2-naphthomethyl 10 radical; or a 2-hydroxyethyl, 2-methoxyethyl or 2-ethoxyethyl group.
- 4. Composition according to any one of Claims 1 to 3, characterized in that, in the said compounds of formula (I), R₂ denotes a hydrogen atom; an amino group; or an A₁, A₂, A₃, A₄ or A₅ group as defined in Claim 2, the said groups optionally being separated from the sulphur, situated in the 8 position, of the sulphonamide functional group of the said compound of formula (I) by an -NH- or -N-(C₁-C₃)alkyl- group.
- 5. Composition according to Claim 4, characterized in that R₂ denotes a radical chosen from the group (G1)
 consisting of a methyl, trifluoromethyl, ethyl,
 2-chloroethyl, propyl, 3-chloropropyl, isopropyl,
 butyl, phenyl, ethoxy, amino and dimethylamino radical.
- 6. Composition according to any one of Claims 1 to 5, characterized in that, in the said compounds of formula (I), R, and R, which are identical or

different, denote a hydrogen or halogen atom; a hydroxyl or amino group; an A_1 , A_4 or A_5 group as defined in Claim 2; or an A_1 , A_2 , A_3 , A_4 or A_5 group as defined in Claim 2 which is separated from the phenol nucleus of the said formula (I) by an oxygen atom or by an -NH-, -N-(C_1 - C_3) alkyl-, -O(C_3) -NH(C_3 -, -NH(C_3 -) alkyl-, -NH(C_3 -, -NH(C_3 -) alkyl-, -NH(C_3 -, -NHSO₂-, -NHSO₂NH- or -NHSO₂N-(C_1 - C_3) alkyl- group.

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7. Composition according to Claim 6, /characterized in that R, represents a hydrogen or chlorine atom; a methyl, hydroxymethyl, methoxymethyl, 1-hydroxyethyl, aminomethyl or methylaminomethy/ radical; a hydroxyl, methoxy or acetoxy radical; and amino, methylamino or 2-hydroxyethylamino radical/ an -NH(CO) R_7 group in which R, represents a radical chosen from the group consisting of the methyl, (G2) ethyl, propyl, isopropyl, butyl, isobutyl, tert-butyl, pentyl, isopentyl, neopentyl, hexyl; cyclopropyl, cyclobutyl, cyclopentyl, cyclopentylmethyl, 3-cyclopentylpropyl, cyclohexyl, 2-cyclohexylethyl, norbornan-2-yl, vinyl, 1-methylvinyl, 2/methylvinyl, 2,2-dimethylvinyl, allyl, 3-butenyl, phenyl, methylphenyl, dimethylphenyl, 2,4,6-t/imethylphenyl, 4-ethylphenyl, (trifluoromethyl)phenyl, hydroxyphenyl, methoxyphenyl, ethoxyphenyl, acetoxyphenyl, (trifluoromethoxy)phenyl, aminophenyl/ 4-dimethylaminophenyl, fluorophenyl, difluorophenyl, fluoro(trifluoromethyl)phenyl, chlorophenyl, /dichlorophenyl, bromophenyl, naphth-1-yl, naphth-\$-yl, (2-methoxy)naphth-1-yl, benzyl,

4'-methoxybenzyl, 2',5'-dimethoxybenzyl, 3',4/'-dimethoxybenzyl, 4'-fluorobenzyl, 4'-chloropenzyl, phenethyl, 2-phenylvinyl, (1-naphthyl) methyl, (2-naphthyl) methyl; tetrahydrofuran-2-yl, furan-2-yl, 5-methyl-2-(trifluoromethyl)furan-3-yl, 5 2-methyl-5-phenylfuran-3-yl, thiophen-2-yl, (thiophen-2-yl)methyl, 3-chlorothiophen-2-yl, 2,5-dichlorothiophen-3-yl, benzothiophen-2-yl, 3-chlorobenzothiophen-2-yl, isoxazol-5-yl, 5-methylisoxazol-3/yl, 3,5-dimethylisoxazol-4-yl, 1,3-dimethylpyra/201-5-yl, 10 3-methylpyrazol-5-yl, 1-tert-butyl-3-methylpyrazol-3-tert-butyl-1-methylpyrazol-5-yl, 5-yl, 1-ethyl-3-methylpyrazol-5-yl/, indol-3-ylcarboxyl, chloropyridinyl, dichloropyridinyl, pyridinyl, 15 5-(bromo)pyridin-3-yl, piperazin-2-yl, quinoxal-2-yl; fluoromethyl, difluoromethyl, trifluoromethyl, 1,1,2,2-tetrafluoroethyl, pentafluoroethyl, heptafluoropropyl, 1,1,2,2,3,3,4,4-octafluorobutyl, nonafluorobutyl, chloromethyl, chloroethyl, 1,1-dimethyl-20 2-chloroethyl, 1,2-dichloroethyl, 1-chloropropyl, 3-chloropropyl, A-chlorobutyl, hydroxymethyl, methoxymethyl, phehoxymethyl, (4-chlorophenoxy) methyl, benzyloxymethyl, acetoxymethyl, 1,2-dihydroxyethyl, 1-phenoxyethyl, 1-acetoxyethyl, 2-(2-carboxyethoxy)-25 ethyl, //-phenoxyethyl, l-acetoxyethyl, methoxycarbonyl, ethoxycarbonyl, (methoxycarbonyl) methyl, 2-carboxyethyl, 2-(methoxycarbonyl)ethyl, 2-carboxycyclopropyl, 2-carboxycyclohexane; methoxy, ethoxy, propoxy, isopropoxy, butoxy, isobutoxy, pentoxy, neopentoxy, hexyloxy, cyclopentyloxy, cyclohexyloxy, inyloxy, allyloxy, propargyloxy, chloromethoxy, l-chloroethoxy, 2-methoxyethoxy, 4-chlorobutoxy,

phenoxy, 4-methylphenoxy, 4-fluorophenoxy, 4-bromophenoxy, 4-chlorophenoxy, 4-methoxyphenoxy, naphth-2-yloxy, benzyloxy; amino, methylamino, ethylamino, propylamino, isopropylamino, butylamino, cyclohexylamino, allylamino, 2-chloroethylamino, 3-chloropropylamino, carboxymethylamino, phenylamino, fluorophenylamino, (trifluoromethyl)phenylamino, ch/orophenylamino, bromophenylamino, 4-acetylphenylamino, methoxyphenylamino, (trifluoromethoxy)phenylamino, 1-ylamino, benzylamino, phenethylamino, 3-ylamino, dimethylamino, 1-pyrolidinyl 4-morpholinyl radicals; or an $-NHSO_2/R_s$ group in which R_{B} represents a radical chosen from the group (G1) as defined in Claim 5.

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8. Composition according to Claim 6, characterized in that R4 represents a hydrogen or chlorine atom; a methyl, ethyl, hydroxymethyl, methoxymethyl, aminomethyl or methylaminomethyl radical; a hydroxyl, methoxy, acetoxy, amino/ methylamino, N-piperidino or 20 N-morpholino group; and -NH(CO)R10 group in which R10 represents one of the radicals listed in the group (G2) as defined in/Claim 7; or an -NHSO₂R₁₁ group in which R₁₁ represents one of the radicals listed in the group (G1) as defined in Claim 5. 25

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9. Composition according to any one of Claims 1 to 8, characterized in that, in the said compounds of formula (I/, R, denotes a hydrogen or halogen atom; an A_1 , A_4 or A_5 group as defined in Claim 2; or an A_1 , A_2 , A_3 , A_4 or A_5 group as defined in Claim 2 which is separated from the phenyl nucleus of the compounds of

formula (I) by an oxygen or sulphur atom or by an -NH-, $-N-(C_1-C_3)$ alkyl-, -NH(CO)-, $-N-(C_1-C_3)$ alkyl-, $-NH(CO)N-(C_1-C_3)$ alkyl- or -NH(CO)O- group.

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- 10.Composition according to Claim 9, characterized in that R₅ represents a hydrogen, chlorine, fluorine or bromine atom; a methyl, trifluoromethyl, allyl, hydroxymethyl, methoxymethyl, l-hydroxyethyl, aminomethyl, methylaminomethyl, methoxy, acetoxy or methylamino radical; an -NH(CO)R₁₃ group in which R₁₃ represents one of the radicals listed in the group (G2) as defined in Claim 7; or an -NHSO₂R₁₄ group in which R₁₄ represents one of the radicals listed in the group (G1) as defined in/Claim 5.
- 11.Composition according to any one of Claims 1 to 10, characterized in that, in the said compounds of formula (I), Y denotes a hydrogen, chlorine, fluorine or bromine atom; a methoxy, ethoxy, propoxy, benzyloxy or phenoxy group; or an -OCH₂CH₂OCH₃, -OCH₂CH₂OCH₃, -OCH₂CH₂OCH₃, -OCH₂CH₂CO₂H or -NHSO₂CH₃ group.

- 12. Composition according to any one of Claims 1 to 11, characterized in that the compounds of formula (I) are chosen from those in which:
- i) R, represents a hydrogen atom;
 R, represents a methyl, ethyl, phenyl or dimethylamino radical;

- R, represents a hydroxyl, amino or methylamino radical; an -NH(CO)R₁₆ group in which R₁₆ represents a radical chosen from the group (G4) consisting of the methyl, methoxymethyl, 2-carboxyethyl, methoxy, amino, ethylamino and 1-pyrrolidinyl radicals; methanesulphonylamino, ethanesulphonylamino and dimethylaminosulphonylamino;
- R₄ represents a hydrogen or chloring atom or a methyl group;
- R₅ represents a hydrogen, chlorine or fluorine atom or a methyl group;
 - Y represents a hydrogen or chlorine atom or a methoxy or -OCH₂(CO)OCH₃ group;
- 15 ii) R, represents a hydrogen /atom;
 - R₂ represents a methyl, ethyl, phenyl or dimethylamino radical;
 - R, represents a hydrogen atom or a methyl radical;
- R, represents a hydroxyl, amino, methylamino or
 -NH(CO)R₁, group in which R₁, represents one of the
 radicals listed in the group (G4) defined above; or
 a methanesulphonylamino, ethanesulphonylamino or
 dimethylaminosylphonylamino group;
 - R_s represents a hydrogen, chlorine or fluorine atom or a methyl, methoxy or methylamino group;
 - Y represents a hydrogen or chlorine atom or a methoxy or -OCH₂(CO)OCH₃ group;
 - iii) R, pepresents a hydrogen atom;
- Ry represents a methyl, ethyl, phenyl or dimethyl-amino radical;
 - /R, represents a hydrogen atom or a methyl radical;

- R₄ represents a hydrogen or chlorine atom or a methyl, methoxy or methylamino radical;
- R_s represents a methylamino or -NH(CO) R_{18} group in which R_{18} represents one of the radicals listed in the group (G4) defined above; or a methanesulphonylamino, ethanesulphonylamino or dimethylaminosulphonylamino group;
- Y represents a hydrogen or chlorine atom or a methoxy or -OCH₂(CO)OCH₃ group;

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- iv) R, represents a hydrogen atom;
 - R₂ represents a methyl, ethyl, phenyl or dimethylamino radical;
 - R, represents a hydrogen atom or a methyl radical;
- R represents a hydrogen or chlorine atom or a methyl radical;
 - R_s represents a hydrogen, chlorine or fluorine atom or a methyl radical;
 - Y represents a hydrogen or chlorine atom or a methoxy or -OCH₂(CO)OCH₃ group.
 - 13. Composition according to any one of Claims 1 to 12, characterized in that the compounds of formula (I) are chosen from:
- 25 N-(2-hydroxyphenyl) methanesulphonamide;
 - N-(2-hydroxy-4-methylphenyl) methanesulphonamide;
 - N-(2-hydroxy-4-aminophenyl) methanesulphonamide;
 - N-(2/hydroxy-4-(acetylamino)phenyl)methanesulphonamide;
- N (2-hydroxy-4-(methoxycarbonylamino)phenyl) methanesulphonamide;
 - / N-(2-hydroxy-5-chlorophenyl)methanesulphonamide;

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- N-(2-hydroxy-4-methyl-5-chlorophenyl) methane
        sulphonamide;
        - N-(2-hydroxy-4-amino-5-chlorophenyl) methane
        sulphonamide;
        - N-(2-hydroxy-4-acetylamino-5-chloropheny/)-
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        methanesulphonamide;
        - N-(2-hydroxy-4-methoxycarbonylamino-5/chloro-
        phenyl) methanesulphonamide;
        - N-(2-hydroxy-5-methoxyphenyl) methan sulphonamide;
        - N-(2-hydroxy-4-methyl-5-methoxyphenyl) methane-
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        sulphonamide;
        - N-(2-hydroxy-4-amino-5-methoxyphenyl)methane-
        sulphonamide;
        - N-(2-hydroxy-4-acetylamino-5-methoxyphenyl)-
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        methanesulphonamide;
        - N-(2-hydroxy-4-methoxycarbohylamino-5-methoxy-
        phenyl) methanesulphonamide;
        - N-(2-hydroxy-6-aminophenyl) methanesulphonamide;
        - N-(2-hydroxy-6-(acetylamino)phenyl)methane-
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        sulphonamide;
        - N-(2-hydroxy-4,6-diam/nophenyl) methanesulphonamide;
        - N-(2-hydroxy-4-acety/amino-6-aminophenyl) methane-
        sulphonamide:
        - N-(2-hydroxy-3,5-dichloro-4-methylphenyl)methane-
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        sulphonamide;
        - N-(2-hydroxy-3, $\frac{4}{2}\dichloro-4-aminophenyl)methane-
        sulphonamide:
        - N-(2-hydroxy-3,5-dichloro-4-(acetylamino)phenyl)-
       methanesulphonamide;
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        - N-(2-hydroxy-3,5-dichloro-4-(methoxycarbonyl-
       amino) pheny * methane sulphonamide;
       - N-(2-hydfoxy-3-(methanesulphonylamino)phenyl)-
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methanesulphonamide;
        - N-(2-hydroxyphenyl)benzenesulphonamide;
        - N-(2-hydroxy-4-methylphenyl) benzenesulphonamide;
        - N-(2-hydroxy-4-aminophenyl)benzenesulphonamide;
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        - N-(2-hydroxy-4-(acetylamino)phenyl)benzene-
        sulphonamide;
        - N-(2-hydroxy-4-(methoxycarbonylamino)phenyl)-
        benzenesulphonamide;
        - N-(2-hydroxy-5-chlorophenyl)ben/enesulphonamide;
        - N-(2-hydroxy-4-methyl-5-chlorophenyl)benzene-
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        sulphonamide;
        - N-(2-hydroxy-4-amino-5-chlorophenyl)benzene-
        sulphonamide:
        - N-(2-hydroxy-4-acetylamino-5-chlorophenyl)-
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        benzenesulphonamide;
        - N-(2-hydroxy-4-methoxycarbonylamino-5-chloro-
        phenyl) benzenesulphonamide;
        - N-(2-hydroxy-5-methoxyphenyl)benzenesulphonamide;
        - N-(2-hydroxy-4-methyl-5-methoxyphenyl)benzene-
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        sulphonamide;
        - N-(2-hydroxy-4/amino-5-methoxyphenyl)benzene-
        sulphonamide:
        - N-(2-hydroxy-4-acetylamino-5-methoxyphenyl)-
       benzenesulphonamide;
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       - N-(2-hydroxy-4-methoxycarbonylamino-5-methoxy-
       phenyl) benzenesulphonamide;
       - N-(2-hydroxy-6-aminophenyl)benzenesulphonamide;
       - N-(2/hydroxy-6-(acetylamino)phenyl)benzene-
       sulphonamide:
       - N/(2-hydroxy-4,6-diaminophenyl)benzenesulphonamide;
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         N-(2-hydroxy-4-acetylamino-6-aminophenyl)benzene-
        ulphonamide;
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- N-(2-hydroxy-3,5-dichloro-4-methylphenyl)benzene-sulphonamide;
- N-(2-hydroxy-3,5-dichloro-4-aminophenyl)benzene-sulphonamide;
- 5 N-(2-hydroxy-3,5-dichloro-4-(acetylamino)phenyl)-benzenesulphonamide;
 - N-(2-hydroxy-3,5-dichloro-4-(methoxycarbonyl-amino)phenyl)benzenesulphonamide;
 - N-(2-hydroxy-3-(benzenesulphonylamino)phenyl)-
- benzenesulphonamide;
 and their addition salts with an acid.
 - 14. Composition according to any one of Claims 1 to 13, characterized in that the compound or compounds of formula (I) and/or the addition salt or their addition salts with an acid preferably represent from 0.0005 to 12% by weight approximately of the total weight of the dreing composition.
- 20 15.Composition according to any one of Claims 1 to 14, characterized in that the addition salts with an acid are chosen from hydrochlorides, hydrobromides, sulphates, citrates, succinates, tartrates, lactates and acetates.

16. Process for the dyeing of keratinous fibres and in particular of human keratinous fibres, such as the hair, characterized in that at least one dyeing composition as defined in one of Claims 1 to 15 is applied to the said fibres and in that the colour is developed at acidic, neutral or alkaline pH using an oxidizing agent which is added only at the time of

use to the dyeing composition or which is present in an oxidizing composition applied simultaneously or sequentially in a separate fashion

- 5 17.Process according to Claim 16, characterized in that the oxidizing agent is chosen from hydrogen peroxide, urea hydrogen peroxide, alkali metal bromates, persalts and enzymes.
- 10 18.Process according to Claim/17, characterized in that the enzymes are chosen from peroxidases, laccases, tyrosinases and oxidoreductases.
- 19.Multi-compartment device or multi-compartment dyeing
 kit, a first compartment of which includes a dyeing
 composition as defined in any one of Claims 1 to 15
 and a second compartment of which includes an
 oxidizing composition.

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